TITLE: Retesting of Patients with Sleep Disorders: Cost-Effectiveness and Guidelines

DATE: 10 August 2016

RESEARCH QUESTIONS

1. What is the cost-effectiveness of retesting patients with sleep disorders who use home oxygen or positive airway pressure devices after diagnosis and treatment initiation?

2. What are the evidence-based guidelines regarding retesting patients with sleep disorders who use home oxygen or positive airway pressure devices after diagnosis and treatment initiation?

KEY FINDINGS

Four evidence-based guidelines were identified regarding retesting patients with sleep disorders who use home oxygen or positive airway pressure devices after diagnosis and treatment initiation.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2011 and August 2, 2016. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

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### Table 1: Selection Criteria

<table>
<thead>
<tr>
<th><strong>Population</strong></th>
<th>Patients, any age, with sleep disorders (e.g., central sleep apnea, obstructive sleep apnea, other sleep disorders requiring oxygen or positive airway pressure device therapy)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intervention</strong></td>
<td>Retesting or reassessing patients with sleep disorders after initial diagnosis and therapy initiation (e.g., PAP device, nocturnal oxygen, PAP plus oxygen)</td>
</tr>
<tr>
<td><strong>Comparator</strong></td>
<td>No reassessment or retesting</td>
</tr>
</tbody>
</table>
| **Outcomes** | Q1: cost-effectiveness (e.g., budget impact, QALY, cost savings)  
 Q2: guidelines and recommendations regarding retesting and reassessing patients with sleep apnea for treatment, after the initial diagnosis (e.g., should patients be retested, how frequently should they be retested, issues around adherence and compliance to therapy, implementation issues) |
| **Study Designs** | Health technology assessments, systematic reviews, economic evaluations, evidence-based guidelines |

PAP = positive airway pressure; QALY = quality-adjusted life year.

### RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by economic evaluations, and evidence-based guidelines.

Four evidence-based guidelines were identified regarding retesting patients with sleep disorders who use home oxygen or positive airway pressure devices after diagnosis and treatment initiation. No relevant health technology assessments, systematic reviews, meta-analyses, or economic evaluations were identified.

Additional references of potential interest are provided in the appendix.

### OVERALL SUMMARY OF FINDINGS

Two guidelines\(^1,4\) were identified addressing the reassessment of pediatric patients with obstructive sleep apnea (OSA). The American Academy of Pediatrics recommends clinicians reassess patients with OSA to identify any signs or symptoms remaining after initial treatment.\(^4\) The American Academy of Sleep Medicine recommends pediatric patients be reassessed within 12 months of diagnosis and documentation of adherence to positive airway pressure device should be obtained.\(^1\)

The American Academy of Sleep Medicine and American Academy of Dental Sleep Medicine recommend that adult patients who are fitted with an oral appliance for OSA undergo follow-up sleep testing and attend periodic office visits with sleep physicians or dentists to confirm the effectiveness of the treatment or to inform the improvement of the treatment.\(^2\) A guideline from AIM Specialty Health recommends that bi-level positive airway pressure device compliance be demonstrated every 90 days for the first year of treatment and annually in the following years.\(^3\)
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses
No literature identified.

Economic Evaluations
No literature identified.

Guidelines and Recommendations


See: Ongoing Treatment with BPAP

See: Key Action Statement 5A: Reevaluation

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APPENDIX – FURTHER INFORMATION:

Previous CADTH Reports